**REMARKS**

Due to the numerous corrections and amendments made to the abstract and specification, Applicants are enclosing herewith a replacement abstract and substitute specification including clean and marked-up copies. The undersigned hereby certifies, to the best of his knowledge and belief, that the enclosed replacement abstract and substitute specification contain no new matter.

In order to expedite the prosecution of the present application and respond to the Examiner's rejection of Claim 1 under 35 USC 112, Claim 1 has been canceled and replaced by newly presented Claims 13-19 which more particularly point out and distinctly claim the subject matter which Applicants regard as the invention. It is respectfully submitted that the newly presented claims read on the elected invention and do not contain any "new matter".

Claim 1 has been rejected under 35 USC 102(b) as being anticipated by Ikeda et al. Applicants respectfully traverse this ground of rejection and urge reconsideration in light of the following comments.

The presently claimed invention is directed to a method of manufacturing a quartz glass slab ingot which comprises the steps of providing a rotatable furnace having a feeder at a top portion thereof, dropping silica powder around the center of a furnace bed in the rotatable furnace with a feeder, fusing the silica powder in the rotatable furnace, depositing the fused silica at the center of the furnace bed and extending the fused silica deposit outwardly from the center of the furnace bed by heating and rotating the furnace.

The present invention enables the manufacture of a quartz glass slab ingot which can be in the form of a column, a solid round bar or a plate. The present invention utilizes the oxygen-hydrogen flame method to manufacture quartz glass in the claimed shape which contains about 200 parts per million of hydroxide. In the conventional method, silica powder is not supplied to the center of the furnace but through several

distributing channels with a carrier gas making it possible to supply a large amount of silica into the furnace and enlarge the scale of the product quartz glass ingot. However, the flow of silica powder tends to interfere with the flow of hydrogen gas and, if the diameter of the quartz glass ingot exceeds 400 mm, the supply rate of silica powder is increased which makes the hydrogen gas flow turbulent and prevents the uniform dispersion of the silica powder in the oxygen-hydrogen gas mixture. This results in the silica powder not being uniformly fused and the generation of bubbles inside the fused quartz glass, which damages the quality of the quartz glass. The present process enables the manufacture of a large quartz glass ingot directly by fusing silica powder without the fusion of a column ingot with secondary heating. It is respectfully submitted that the reference cited by the Examiner does not disclose the presently claimed invention.

The Ikeda et al reference discloses a method for producing a quartz glass crucible which comprises the steps of heating and fusing a rotating layer 3 charged with a powder of silicon dioxide. The silicon dioxide powder is supplied to a rotatable mold 1 having an open top to form a layer 3 charged with silicon dioxide along the inner peripheral wall of the mold, the layer 3 is internally heated and fused while covering the open top with a lid and additional silicon dioxide powder is supplied which is fused and scattered to form a transparent layer 8 so that a quartz glass crucible having a smooth inner surface can be produced.

By definition, a "crucible" is not a "slab ingot". As such, the process disclosed in Ikeda et al has nothing to do with the manufacture of a quartz glass slab ingot. A crucible is a container having a wall for containing something therein as opposed to a quartz ingot which is a solid slab having no side walls and is used to manufacture different quartz glass products such as a silicon wafer boat for holding silicon wafers by cutting the ingot into a desirable form. In Ikeda et al, the supplied silicon dioxide powder does not accumulate

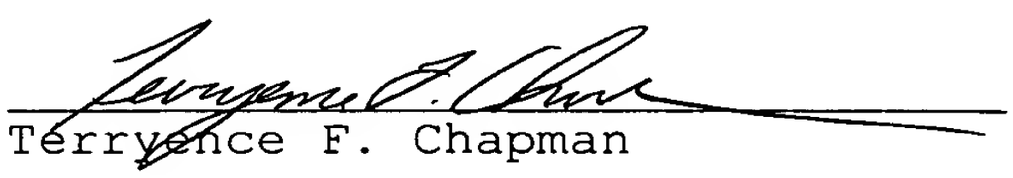
at the bottom but is instead deposited on the surface of the rotating mold to form a fused rotating layer and subsequently a transparent layer on the fused rotating layer.

In contrast to Ikeda et al, the present invention requires that fused silica is deposited at the center of a furnace bed and extended outwardly therefrom by heating in rotation of the furnace to form the quartz glass slab ingot. In Ikeda et al, the silicon dioxide powder is supplied along the inner peripheral wall of a rotating mold to deposit the silicon powder layer on an outer surface of the mold. As such, it is respectfully submitted that currently presented Claim 13 is clearly patentably distinguishable over the Ikeda et al reference.

Dependent Claims 14-19 even further distinguish the claimed invention over the cited prior art. Claim 14 requires that zirconia particles having a diameter of from 2-10 microns are deposited on the furnace bed prior to dropping the silica powder thereon. Claim 15 requires that the atmosphere in the furnace have a hydrogen/oxygen gas ratio of from 2.1 to 2.5. Claim 16 requires that the raw material be fed to the furnace at a rate of from 1.0 to 10 kg/hr. Claims 17-19 require that the quartz glass slab ingot have specific shapes. It is respectfully submitted that the Ikeda et al reference has no disclosure with respect to any of the above-disclosed claimed features of the present invention. Therefore, Claims 14-19 are even further patentably distinguishable over the prior art cited by the Examiner.

The Examiner is respectfully requested to reconsider the present application and to pass it to issue.

Respectfully submitted,



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